

VERSCOLORED EMERALD *Amazilia versicolor*

Two specimens were collected by mistnet at 1700 m. Neither specimen had enlarged gonads; a male was moulting tail feathers and a female had no moult.

COPPER-RUMPED HUMMINGBIRD *Amazilia tobaci*

One specimen (♀) was collected on the summit at 1700 m. It was previously known from the southern slopes of this tepui up to 1500 m. The bird had small ovaries and was in body moult.

RUFIOUS-TAILED TYRANT *Knipolegus poecilurus*

This flycatcher is widespread in the Pantepui. A specimen collected at c. 2400 m on the south rim by an expedition from the Universidad Central de Venezuela in 1956, deposited at EBRG, is the only record of this species from Auyán-tepui.

LESSER ELAENIA *Elaenia chiriquensis*

Two male specimens of this widespread species were collected at 1700 and 2200 m; neither had enlarged gonads or moult, but both were rather fat. It was previously known from the slopes up to 1100 m (Gilliard 1941).

BLACK-BILLED THRUSH *Turdus ignobilis*

This thrush was fairly common in wooded areas. Three of five males had enlarged testes and one of two females had a moderately enlarged ovary. None of the birds was in moult. The Phelps Venezuela Expedition collected this species on the south slopes up to 1500 m (Gilliard 1941), but did not find it on the summit.

RED-SHOULDERED TANAGER *Tachyphonus phoenicius*

Gilliard (1941) collected this species from 460 m on the savanna to 1800 m on the slopes. We took an adult male with moderately enlarged gonads at 1700 m on the plateau.

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Appendix 1

Coordinates and elevations of 1994 collecting localities.

Camp I.	5°51'N, 62°32'W, 1700 m.
Camp II.	5°54'N, 62°29'W, 1750 m.
Camp III.	5°53'N, 62°38'W, 1850 m.
Camp IV.	5°58'N, 62°33'W, 1700 m.
Camp V.	5°46'N, 62°32'W, 2200 m.

Appendix 2

Complete list of birds known from the summit plateau of Auyán-tepui, Estado Bolívar, Venezuela. * = sight record.

Crypturellus pitaritepui, *Podiceps dominicus*, *Cathartes aura**, *Coragyps atratus**, *Buteo magnirostris**, *Buteogallus urubitinga**, *Elanoides forficatus**, *Ortalis motmot**, *Actitis macularia**, *Gallinago paraguaiensis**, *Columba fasciata*, *Ara chloroptera**, *Nannopsittaca panychlora*, *Aegolius harrisi*, *Steatornis caripensis*, *Caprimulgus longirostris*, *Streptoprocne zonaris**, *Cypseloides phelpsi*, *Aeronautus montivagus**, *Campylopterus curvipennis*, *Colibri delphinae*, *Colibri coruscans*, *Polytmus milleri*, *Amazilia versicolor*, *Amazilia tobaci*, *Heliodoxa xanthogonys*, *Piculus rubiginosus*, *Cranioleuca demissa*, *Premnoplex adusta*, *Automolus voraimae*, *Lochmias nematura*, *Thamnophilus insignis*, *Myrmothera simplex*, *Chloropipo uniformis*, *Knipolegus poecilurus*, *Hirundinea ferruginea**, *Todirostrum russatum*, *Mecocerculus leucophrys*, *Elaenia chiriquensis*, *Elaenia dayi*, *Elaenia pallatangae*, *Troglodytes rufus*, *Turdus olivater*, *Turdus ignobilis*, *Macroagelaius imthurni*, *Myioborus castaneicapillus*, *Coereba flaveola*, *Diglossa major*, *Tangara cyanoptera*, *Tachyphonus phoenicius*, *Catamenia homochroa*, *Atlappetes personatus*, *Zonotrichia capensis*.

A distinctive new subspecies of Macgregor's Bowerbird (*Ptilonorhynchidae*) of New Guinea

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Macgregor's Bowerbird *Amblyornis macgregoriae* is the most widely distributed of the four *Amblyornis* species of 'maypole' bower-building 'gardener' bowerbirds, all confined to mainland New Guinea. Macgregor's Bowerbird is found throughout the main mountain ranges of New Guinea except those of the extreme west of Irian Jaya (Tamrau, Arfak and Wandammen Mts.) at altitudes of 1600–3300 (rarely 1200–3300) m (Gilliard 1969, Schodde & McKean 1973, Beehler *et al.* 1986). Adult males are adorned with an extensive bright orange crest which they display to females during courtship at bowers they construct of sticks placed about a central sapling and decorated with moss and various objects including fruits, flowers and leaves (Frith 1970, Cooper & Forshaw 1977, Borgia 1986).

In the course of a study of bowerbird specimens in several major museum collections about the world a series of eight skins of Macgregor's Bowerbird from Mt. Bosavi, Southern Highlands, Papua New Guinea, were examined at the Bernice Pauahi Bishop Museum (BPBM), Honolulu, Hawaii, in January 1995. These consisted of four adult (fully crested) males, three immature (uncrested) males and one adult female, and were all collected during 6–9 June 1973 at c. 1400 m on the NNW slopes of Mt. Bosavi in forest. Seven were recorded by the preparator as caught in "snap traps" set to catch live mammals and one was mist-netted by A. B. Mirza.

We again examined all eight BPBM specimens from Mt. Bosavi at the American Museum of Natural History (AMNH), New York, in February 1995 where direct comparisons could be made with specimens from the nearest collection locality for the species, the Mt. Hagen area, Eastern Highlands, Papua New Guinea. This AMNH material, of the subspecies *A. m. kombok* (Schodde & McKean 1973), was extensive enough (see below) to permit meaningful conclusions concerning any differences in morphology between the birds of the Mt. Bosavi and Mt. Hagen area samples. For comparative purposes the colours of Smithe (1975) are referred to by their capitalized names with the numbers allocated to them in parenthesis. Where we deem a colour name of Smithe (1975) inappropriate we do not capitalise the name we use.

All wing and tail measurements were made with the same rulers, all others with the same electrical digital calipers, and all by CBF. Wing length measured was the flattened and straightened, thus maximised, chord, using a stopped steel rule. Tail length was measured from the point of entry of the central pair into the bird's skin to the tip of the longest feather with a small steel rule. Bill length was measured from

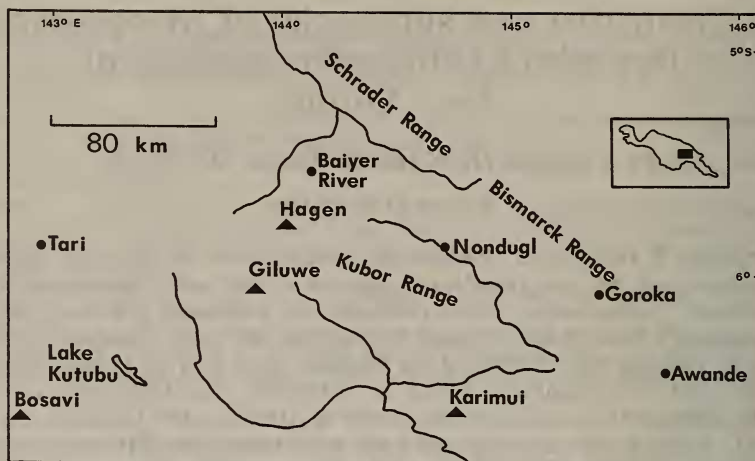


Figure 1. Map showing the location of Mt. Bosavi, type locality of *Amblyornis macgregoriae lecrovae*, and other locations in Papua New Guinea mentioned in the text. Solid triangles, mountains; solid dots, places. After Diamond (1972).

the bill tip to the cranio-facial hinge, and bill width was taken at the anterior edge of the nostril. Tarsus length was that of the tarsometatarsal bone.

Macgregor's Bowerbird was previously known to occur on Mt. Bosavi as Bell (1975) reported seeing it there in August 1970 and Thane Pratt (unpubl. data *in litt.*) also saw the species there in February 1975, but it appeared to have remained uncollected there until the BPBM specimens detailed here were taken. We were much surprised, therefore, to discover in June 1995 a single adult male specimen collected on 30 August 1970 at 1525 m a.s.l. on Mt. Bosavi by H. L. Bell within the collections of the Papua New Guinea National Museum and Art Gallery (PNGM), Port Moresby. Bell had prophetically written in pencil on his field specimen label "new subspecies?"

Mt. Bosavi is a 2600 m mountain located in the Western District of Papua New Guinea north of the Fly River delta of southern Papua New Guinea (Fig. 1), isolated from the central mountains of New Guinea as a vast discrete extinct volcanic cone in extensive lowlands. The nearest known population of Macgregor's Bowerbird to that on Mt. Bosavi is on the western side of the Tari Valley (Frith & Frith 1992) where a single specimen was collected for the BPBM and another for the Australian Museum (AM). Whilst we had previously examined and measured these two Tari Valley specimens they were not available for direct comparative study with the Bosavi series. In any event, little could be concluded from such limited material.

The generally brownish plumage of all eight BPBM birds from Mt. Bosavi is consistently and strikingly more saturated with reddish pigment (136) to give them an overall different appearance to a series of

A. m. kombok birds consisting of the following: 13 (8 adult ♂♂, 2 immature ♂♂, 2 ♀♀, 1 unsexed) from Mt. Hagen at c. 8500 feet, three (1 adult ♂, 1 immature ♂, 1 ♀) from Nondugl, two (1 adult ♂, 1 immature ♂) from Mt. Karimui, one adult ♂ from Awande and four (3 adult ♂♂, 1 immature ♂) from Kubor Mts. (see Fig. 1 for locations). The strikingly more reddish plumage of the Bosavi birds is clearly indicative of differentiation and is not a product of any kind of post-mortem colour changes described and discussed by Gilliard & LeCroy (1961). The Mt. Bosavi birds are, sex for sex and age group for age group, consistently a little smaller in both wing and tail length than *A. m. kombok* (Table 1). Gilliard & LeCroy (1961) stressed the use of tail (and crest) length to differentiate subspecies of *A. macgregoriae*. Adult male crest length measured from posterior base (Gilliard & LeCroy 1961) does not differ between Bosavi birds and *A. m. kombok*, but in exposed crest length the Bosavi birds may show a smaller area of colour. The latter measurement is less objective than the former, being a measure of the length of colourful crest viewed from above, but it is possible that Bosavi birds have more dark fore-crown feathering resulting in a shorter visible crest (Table 1).

As we agree with Gilliard (1969), Diamond (1972) and Schodde & McKean (1973) that the birds from the Kubor Mts., Mt. Karimui, Awande, Nondugl and Mt. Hagen are all clearly attributable to the subspecies *A. m. kombok*, we confine our comparisons of the plumage of the Mt. Bosavi birds to that of the 16 from Mt. Hagen and Nondugl. A general description of these 16 specimens follows:

Underparts somewhat variable in degree of colour saturation (worn birds being slightly to considerably paler) but typically rich Buff (24) to Clay Color (26), and to Cinnamon (123A) in only two specimens. An indistinct broad area of the chest to the upper breast somewhat darker and browner, close to Raw Umber (23), but variable. Throat slightly paler than abdomen. Underwing coverts pure Clay Color (123B) and trailing edge of the primaries a more dilute tone of this colour. Forecrown, mantle and back of adult males Raw Umber (23) to Prout's Brown (121A) and crown of immature males and females redder, like Amber (36) but darker. Wings and upper tail less rich, more an Olive-Brown (28). Crest colour of the adult males variable, the richest being Spectrum Orange (17) in specimen 705724 and others paler, possibly to some degree due to fading.

Comparative photographs, taken under similar conditions by us, of the eight Mt. Bosavi specimens at the BPBM and of the single specimen at the PNGM enable us to determine that the latter is of similar appearance to the former. Notwithstanding the prior collection date of Bell's single specimen we designate it as a paratype because the BPBM series of eight clearly represents a far sounder basis for formal description of the holotype. A comparative description of the Mt. Bosavi population of *A. macgregoriae* follows:

***Amblyornis macgregoriae lecrovae* subsp. nov.**

Holotype. Bernice Pauahi Bishop Museum, Honolulu, Hawaii, BBM-NG 103303, adult male, from NNW slopes of Mt. Bosavi, Southern Highlands Province, Papua New Guinea, 1400 ± m, collected

TABLE 1
Measurements of all known specimens of *Amblyornis macgregoriae lecrovae* and of sexed specimens of *A. m. kombok* in several museum collections

	Wing length	Tail length	Tarsus length	Bill length	Bill width	Crest length ³	Exposed crest length ⁴
A. m. lecrovae¹							
Adult males							
BBM-NG 103303 Type	131	82	37.0	28.5	8.5	63	75
BBM-NG 103327	130	78	37.7	28.5	7.7	63	74
BBM-NG 103328	135	84	36.4	25.9	7.5	66	67
BBM-NG 103329	132	84	35.3	27.7	7.7	65	83
PNGM B937/25303	132	80	37.4	28.7	8.8	62	83
Mean, s.d.	132, 1.87	82, 2.58	36.8, 0.95	27.9, 1.16	8.0, 0.57	64, 1.64	76, 6.64
Immature males							
BBM-NG 103330	131	82	34.0	27.4	7.1		
BBM-NG 103331	133	83	—	28.3	7.9		
BBM-NG 103337	129	80	38.9	27.2	7.3		
Mean, s.d.	131, 2.00	82, 1.20	36.5, 3.46	27.6, 0.59	7.4, 0.42		
Adult female							
BBM-NG 103339	129	81	37.9	26.6	8.1		
A. m. kombok²							
Adult males							
Mean, s.d.	137, 3.92	87, 3.30	37.4, 2.03	28.1, 0.85	7.4, 0.55	63, 4.98	84, 5.59
<i>n</i>	32	29	32	32	31		32
Immature males							
Mean, s.d.	135, 3.66	85, 2.80	37.8, 0.97	27.8, 0.79	7.5, 0.60		
<i>n</i>	17	17	17	17	17		
Adult females							
Mean, s.d.	131, 3.03	84, 2.91	36.2, 1.45	28.7, 0.73	8.6, 0.62		
<i>n</i>	11	11	11	11	11		

¹BBM-NG=Bishop Museum, Honolulu; PNGM=Papua New Guinea National Museum and Art Gallery, Port Moresby.

²The 60 specimens of *A. m. kombok* include: 25 from American Museum of Natural History, New York; 12 Natural History Museum, Tring; 10 Australian National Wildlife Collection, CSIRO, Canberra; 6 Australian Museum, Sydney; 5 PNGM; 1 BPBM; and 1 Field Museum of Natural History, Chicago.

³From posterior base (*cf.* Gilliard & LeCroy 1961, Schodde & McKean 1973).

⁴The length of visible crest colour viewed and measured from above.

by 'pan' trap by A. B. Mirza on 6 June 1973. See Table 1 for measurements.

Diagnosis. Upperparts: forecrown, side of face, malar, crown and mantle much richer and more strongly suffused with orange than in *A. m. kombok* (see above), being closest to Raw Umber (23) but slightly darker and suffused with rich brown-orange. Wings and tail less olive and more brown-orange than in *A. m. kombok*, the former being closer

to but darker than Cinnamon-Brown (33) and the latter closer to Raw Umber (23). Crest colour as the most heavily saturated specimen of *A. m. kombok*, being Spectrum Orange (17). Underparts: conspicuously more orange-brown than all above specimens of *A. m. kombok*, and particularly so on the chin, throat and the darker area of the chest and upper breast. Throat closest to Raw Umber (123) and the darker chest/breast area, sides of abdomen and the flanks closest to Cinnamon Brown (33) but washed orange; these darker areas contrasting slightly with the paler Cinnamon (123A) remainder of the underparts. Underwing coverts pale rich ginger (as Clay Color 123B, but much more orange) and trailing edge of the primaries a more dilute tone of this colour.

Paratypes. Adult male specimens BBM-NG 103327, 103329 and PNGM B937/25303 are very similar to the holotype specimen but BBM-NG 103329 has a deeper orange crest. Specimen BBM-NG 103328 is even more orange, almost red-brown above, and its crest is as 103320. All three immature males and the female Mt. Bosavi birds (Table 1) are plumaged as the adult males but (lacking a crest) have the forecrown and crown slightly darker and more richly suffused orange than the rest of the upperparts and contrast with them slightly.

Distribution and habitat. Presently known only from the forest of the type locality and at altitudes of *c.* 1400 and 1525 m a.s.l. While this new subspecies is presently known only from Mt. Bosavi the use of this geographical feature as a trinomial is not desirable or appropriate as similar birds may prove to be found elsewhere. The southern end of the Muller Range is a possibility, though an unlikely one.

Comments. *A. m. lecrovae* is distinctly different in overall appearance to *A. m. kombok* in being darker and significantly more brown-orange. Of the above-described *A. m. kombok* series only female-plumaged (crestless) specimen AMNH 705730 from Mt. Hagen of uncertain sex approaches the coloration of the Mt. Bosavi *A. m. lecrovae* series, being similar in colour and tone above except for the upper tail which is not as dark or orange. Its crown is similar to but perhaps not quite as dark and orange as in female-plumaged *A. m. lecrovae*. Its underparts are generally similar to *A. m. lecrovae* but the throat is paler and the remainder, including the underwing, not as dark or as orange-suffused as the latter subspecies. Thus adult male, immature male and female *A. m. lecrovae* are conspicuously more orange-suffused and darker in their plumage than *A. m. kombok*. T. Pratt (*in litt.*) handled one mist-netted live adult male Macgregor's Bowerbird on Mt. Bosavi and wrote of it at the time "had a very short crest—molting?", which is noteworthy in view of his considerable experience with the species elsewhere.

We have found no description of the form of bower built by male Macgregor's Bowerbirds on Mt. Bosavi, but as Bell (1975) and T. Pratt (*in litt.*) made no remark in this regard and as bowers do not appear to differ in general appearance between the other populations of the species, we suspect Mt. Bosavi bowers are not significantly different in general appearance. We would not hesitate to elevate the Bosavi birds to full species status, however, should they prove to build a consistently different bower to those of other populations of the species, given the